

Breakthrough technologies

The GOLDD advantage

The Thermo Scientific Niton XL3t x-ray tube-based x-ray fluorescence (XRF) analyser with GOLDD technology is purpose-built for your most demanding applications. Where low detection limits and high sample throughput are critical, our combination of hardware, software, features, and direct industry experience are combined to provide you with a solution to your most difficult analytical requirements.

The Thermo Scientific™ Niton™ XL3t analyser combines advanced electronics and materials technology with dynamic features and the most versatile x-ray tubes ever used in a handheld XRF instrument. When this power is harnessed to our groundbreaking Thermo Scientific™ GOLDD™ technology, it takes your analytical capabilities to a whole new level. The direct benefits to you include: real-time results and ultimate performance in our robust, proven design.

From their extraordinary speed and precision to the integrated, tilting, colour, touch-screen display and the customisable menus for ease of use, ergonomic Thermo Scientific™ Niton™ XL3t GOLDD™ analysers are lightweight, ruggedly constructed, and fast.

What is the GOLDD advantage? GOLDD technology delivers vast improvements in sensitivity or measurement times – as much as 10-times faster than conventional Si-PIN detectors, and up to 3-times more precise than conventional silicon drift detectors (SDD). We achieved this improvement by uniquely combining an improved Niton XL3t 50kV, 40 µA x-ray tube, closely optimised geometry, and patented signal processing hardware and software.

These advantages are coupled with our proprietary drift detector, one of the largest area drift detectors that is commercially available in a handheld XRF analyser, providing you with superior performance in the form of faster analysis and lower detection limits. The final product is the Niton XL3t GOLDD... a more versatile and technologically advanced handheld XRF analyser, designed without compromise to make you more successful.

Thermo Scientific Niton XL3t GOLDD analysers provide you with many distinct advantages:

- High count rate for lower detection limits and faster analysis
- True lab-quality performance in a handheld instrument



The Instrument of Choice

The Niton XL3t GOLDD is the instrument of choice when you require extreme accuracy, precision, and ease of use, with its faster analysis, and higher precision. It is the ideal instrument to measure toxic substances in:

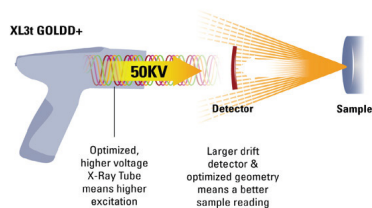
- consumer goods
- environmental applications
- electronics
- health & beauty products

The improved limits of detection put the Niton XL3t GOLDD on par with most laboratory grade systems used in testing consumer products for toxic elements. The Niton XL3t GOLDD stands alone with its many standard features and available options. You can pinpoint areas of interest on a sample using the integrated color CCD camera and the optional integrated 3mm small-spot collimation, and then store the test area image along with the analysis data. Take advantage of the standard Thermo Scientific Niton Data Transfer (NDT©) PC software suite to customise the instrument. You can set user permissions, generate custom reports, print certificates of analysis personalised with your own company logo, or remotely monitor and operate the instrument hands-free from your PC.

Integrated USB and Bluetooth™ communications provide direct data transfer to your PC or networked storage device, eliminating the cumbersome data synchronisation procedures required by Windows Mobile®-based XRF analysers.



Product Specification



Large area drift detector and optimized geometry for more x-ray counts: you get faster and more precise readings.

TestAll Tells All

TestAll Technology, with its automatic mode selection, determines whether lead is present on the surface coating or in the substrate of the sample undergoing testing. It then applies the appropriate analysis mode, helping to eliminate guesswork for faster, more efficient screening and allowing non-technical users to easily perform measurements with minimal training.

Meeting the Compliance Demand

An effective screening program using Thermo Scientific Niton XL3t GOLDD analysers greatly reduces the chance that non-compliant materials will enter the manufacturing process or accidentally end up on store shelves. These tools allow the operator to analyse elements that are part of ASTM F2617, IEC 62321, and U.S. EPA Method 6200 and in compliance with the Consumer Product Safety Improvement Act (CPSIA), California Proposition 65, EN 71-3, Restriction of Hazardous Substances Directive (RoHS/WEE), and the Resource Conservation and Recovery Act (RCRA).

Niton XL3t Analysers – The GOLDD Standard

Whether you need an analyser for environmental applications, or electronics and consumer goods testing, the Thermo Scientific Niton XL3t GOLDD raises the bar – combining the outstanding analytical performance of lab-grade instrumentation with the high-speed performance, ease of use, and cutting-edge technology that you have come to expect from Thermo Scientific portable XRF analysers.

Weight	<3.0 lbs (<1.3 kg)
Dimensions	9.60 x 9.05 x 3.75 in (244 x 230 x 95.5 mm)
Tube	Au anode (9-50 kV, 0-40 µA max)
Detector	Geometrically Optimized Large Area Drift Detector (GOLDD) Proprietary detector with 180,000 throughput cps Resolution: < 185 eV @ 60,000 cps @ 4µ sec shaping time
System Electronics	533 MHz ARM 11 CPU 300 MHz dedicated DSP 80 MHz ASICS DSP for signal processing 4096 channel MCA 32 MB internal system memory/128 MB internal user storage
Display	Tilting, colour, touch-screen display
Standard Analytical Range	Up to 30 elements from S – U (varies by application)
Data Storage	Internal >10,000 readings with spectra
Data Transfer	USB, Bluetooth, and RS-232 serial communication
Security	Password-protected user security
Mode (Varies by application)	Alloy Modes: Electronics Alloy Bulk Modes: Soil, Mining, TestAll™ Plastic Modes: RoHS Plastics, Toy & Consumer Goods Plastics, TestAll, Custom Modes: Upon request (based on application feasibility)
Data Entry	Touch-screen keyboard User-programmable pick lists Optional wireless remote barcode reader
Standard Accessories	Integrated CCD camera for locating and storing images Locking shielded carrying case Shielded belt holster Two lithium-ion battery packs 110/220 VAC battery charger/AC adaptor PC connection cables (USB and RS-232) Niton Data Transfer (NDT) PC software Safety lanyard Check samples/standards
Optional Features and Accessories	3 mm small-spot collimation Thermo Scientific SmartStand™ portable test stand, stationary(bench-top) test stand, mobile test stand, Field Mate™ Thermo Scientific Extend-a-Pole™ extension pole Soil testing guard
Licensing/Registration	Varies by region. Contact Niton UK
Compliance	CE, RoHS

Thermo Scientific Niton XL3t GOLDD analysers represent just one of our handheld analyser solutions, which include XRF tools for metal alloy identification, mining and exploration, lead-based paint testing, RCRA metals in soil, toy and consumer goods testing, RoHS and WEEE compliance screening, and many other analysis needs.

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